

Amendment to the claims:

Please cancel claims 1-4, 6-16 and 18-24.

Please add new claims 25-40.

Claims 1-24 (canceled)

25. (New) A gas distribution cathode for plasma enhanced deposition of semiconductor materials onto multiple webs of substrate material simultaneously comprising:

- (a) a cathode body; said cathode body comprising a monolithic body having two opposed planar exterior surfaces and an edge; said monolithic body having a process gas distribution system integrated entirely therein, said process gas distribution system including:
  - i) at least one primary gas distribution channel formed into said monolithic body; said primary gas distribution channel beginning at a first point on the edge of said monolithic body and extending nearly completely through said monolithic body in a direction which is parallel to said planar surfaces;
  - ii) a plurality of secondary gas distribution channels branching off from said primary gas distribution channel and extending nearly completely to the edge of said monolithic body in a direction which is parallel to said planar surfaces; and
  - iii) a plurality of gas outlet channels branching off from said secondary gas distribution channels and extending to gas outlets at one of said two

opposed planar exterior surfaces of monolithic body, some of said plurality of gas outlet channels extending to gas outlets at a first of said two opposed planar exterior surfaces and the remainder of said plurality of gas outlet channels extending to gas outlets at a second of said two opposed planar exterior surfaces such that the gas outlets are evenly dispersed on both of said planar surfaces of said monolithic body; and

- (b) a plurality of gas dispersion plates covering said gas outlets so as to prevent direct, line-of-sight travel of process gas from said gas outlets to a substrate upon which semiconductor material is to be deposited.

26. (New) The gas distribution cathode of claim 25, wherein said gas outlets are evenly positioned on said two opposed planar surfaces of said monolithic body said from 1 to 4 inches apart.

27. (New) The gas distribution cathode of claim 26, wherein said gas outlets are evenly positioned on said two opposed planar surfaces of said monolithic body from 2 to 3 inches apart.

28. (New) The gas distribution cathode of claim 25, further including a spent gas evacuation system.

29. (New) The gas distribution cathode of claim 28, wherein said spent gas evacuation system includes spent gas inlets evenly positioned exclusively along said edge of said of said monolithic body.

30. (New) The gas distribution cathode of claim 29, wherein said spent gas inlets are connected to a spent gas collection/removal manifold system formed within said monolithic body.

31. (New) The gas distribution cathode of claim 25, wherein said monolithic body, and said gas dispersion plates are formed from a metal or metallic alloy which is nonreactive with said process gases.

32. (New) The gas distribution cathode of claim 31, wherein said metal or metallic alloy which is nonreactive with said process gases is stainless steel.

33. (New) An apparatus for the plasma enhanced deposition of semiconductor materials onto one or more webs of substrate material, said apparatus including:

a gas distribution cathode comprising:

- (a) a cathode body; said cathode body comprising a monolithic body having two opposed planar exterior surfaces and an edge; said monolithic body having a

process gas distribution system integrated entirely therein, said process gas distribution system including:

- i) at least one primary gas distribution channel formed into said monolithic body; said primary gas distribution channel beginning at a first point on the edge of said monolithic body and extending nearly completely through said monolithic body in a direction which is parallel to said planar surfaces;
  - ii) a plurality of secondary gas distribution channels branching off from said primary gas distribution channel and extending nearly completely to the edge of said monolithic body in a direction which is parallel to said planar surfaces; and
  - iii) a plurality of gas outlet channels branching off from said secondary gas distribution channels and extending to gas outlets at one of said two opposed planar exterior surfaces of monolithic body, some of said plurality of gas outlet channels extending to gas outlets at a first of said two opposed planar exterior surfaces and the remainder of said plurality of gas outlet channels extending to gas outlets at a second of said two opposed planar exterior surfaces such that the gas outlets are evenly dispersed on both of said planar surfaces of said monolithic body; and
- (b) a plurality of gas dispersion plates covering said gas outlets so as to prevent direct, line-of-sight travel of process gas from said gas outlets to a substrate upon which semiconductor material is to be deposited.

34. (New) The apparatus of claim 33, wherein said gas outlets of said gas distribution cathode are evenly positioned on said two opposed planar surfaces of said monolithic body said from 1 to 4 inches apart.

35. (New) The apparatus of claim 34, wherein said gas outlets of said gas distribution cathode are evenly positioned on said two opposed planar surfaces of said monolithic body from 2 to 3 inches apart.

36. (New) The apparatus of claim 33, wherein said gas distribution cathode further includes a spent gas evacuation system.

37. (New) The apparatus of claim 36, wherein said spent gas evacuation system includes spent gas inlets evenly positioned exclusively along said edge of said of said monolithic body.

38. (New) The apparatus of claim 37, wherein said spent gas inlets are connected to a spent gas collection/removal manifold system formed within said monolithic body.

39. (New) The apparatus of claim 33, wherein said monolithic body and said gas dispersion plates of said gas distribution cathode are formed from a metal or metallic alloy which is nonreactive with said process gases.

40. (New) The apparatus of claim 39, wherein said metal or metallic alloy which is nonreactive with said process gases is stainless steel.